

Date: Sun, 7 Mar 93 04:30:09 PST  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V93 #286  
To: Info-Hams

Info-Hams Digest                      Sun, 7 Mar 93                      Volume 93 : Issue 286

Today's Topics:

770-806 MHz? Any clues?  
[QUESTION] Free Internet access for Ham Radio Operators? (3 msgs)  
    alfa, bravo ...  
    Ham-Oriented Lists at Listserv@Knuth.MTSU.edu  
    INFO WANTED: Tokyo Hy-Power QRP CW/SSB HT  
    Knwd TS440S SWR shutdown  
    Old Motorola Repeater - Need help & Docs  
    On-line frequency lists?  
    Periphex SUCKS!  
    Propagation Forecast Bulletin 9 ARLP009  
    Studio mics for HF?  
    VK2SG RTTY DX Notes, 5 March

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.  
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Date: Sun, 7 Mar 1993 07:48:02 GMT  
From: swrinde!zaphod.mps.ohio-state.edu!darwin.sura.net!sgiblab!a2i!  
davidj@network.UCSD.EDU  
Subject: 770-806 MHz? Any clues?  
To: info-hams@ucsd.edu

In <1993Mar5.084044.119970@marshall.wvnet.edu> rcbi106@marshall.wvnet.edu writes:

>Does anyone have a band plan or a list of radio services authorized in  
>the 770-806MHz range? Is this TV? Cellular? Paging? I did hear some  
>carriers and audio in there, but I never could peg a clean signal. It

>Anyway, if you have a clue for services in the 770-806 range, It would  
>be a big help if you could post or e-mail it to me. Thanks very much!

TV audio is 25 kHz deviation which requires wide mode, otherwise it will sound just like you describe.

73 WA6NMF

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Hi,

My uncle heard a rumor that Ham Radio Operators can get free access to the Internet somehow. He didn't have any more details than that but he asked me check around for him. I guess it would have to be some kind of network where he could dial up and then connect from there. This was access via modem that he was talking about, not packet radio.

Thanks for you time.

— —

\*\*\*\*\*  
 \* Scott E. Frank \* Laugh and the world laughs with you, \*

\* frank@eggo.csee.usf.edu \* fart and you stand alone. \*  
\*\*\*\*\*

-----  
Date: 7 Mar 93 08:16:46 GMT  
From: swrinde!zaphod.mps.ohio-state.edu!magnus.acs.ohio-state.edu!csn!ub!dsinc!  
cs.widener.edu!widener!nobody@network.UCSD.EDU  
Subject: [QUESTION] Free Internet access for Ham Radio Operators?  
To: info-hams@ucsd.edu

In article <1993Mar7.061549.19585@ariel.ec.usf.edu> frank@eggo.csee.usf.edu (Scott Frank) writes:

>Hi,  
> I'm posting this for my uncle so if it sounds like I don't know anything  
>about amateur radio that's because I don't. :-)  
>  
> My uncle heard a rumor that Ham Radio Operators can get free access to the  
>Internet somehow. He didn't have any more details than that but he asked me  
>check around for him. I guess it would have to be some kind of network where  
>he could dial up and then connect from there. This was access via modem that  
>he was talking about, not packet radio.  
>  
> It doesn't sound very likely to me, but I just thought I'd ask. Anybody know  
>anything about this?  
>  
> Thanks for you time.

>--  
>\*\*\*\*\*  
>\* Scott E. Frank \* Laugh and the world laughs with you, \*  
>\* frank@eggo.csee.usf.edu \* fart and you stand alone. \*  
>\*\*\*\*\*

Please let me know where this is when you finally find it!

thanks,

stuart b. tener  
tener@cs.widener.edu  
(215)-338-6005

-----  
Date: Sun, 7 Mar 1993 09:00:08 GMT  
From: spool.mu.edu!darwin.sura.net!haven.umd.edu!wam.umd.edu!adam@decwrl.dec.com  
Subject: [QUESTION] Free Internet access for Ham Radio Operators?  
To: info-hams@ucsd.edu

In article <1993Mar7.061549.19585@ariel.ec.usf.edu> frank@eggo.csee.usf.edu (Scott Frank) writes:

>Hi,

>

> My uncle heard a rumor that Ham Radio Operators can get free access to the  
>Internet somehow. He didn't have any more details than that but he asked me  
>check around for him. I guess it would have to be some kind of network where  
>he could dial up and then connect from there. This was access via modem that  
>he was talking about, not packet radio.

Yes and no. I know of a gateway that will pass mail back and forth through the internet and packet. Now, if you consider dialing into a local packet bbs by modem, you could theoretically have internet access (dial into a local packet node by modem and then pass mail through it to the gateway, onto the internet...). That would be totally free and never require a radio.

--Adam

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Date: 6 Mar 1993 22:45 PST

From: swrinde!sdd.hp.com!caen!destroyer!cs.ubc.ca!unixg.ubc.ca!erich.triumf.ca!  
bennett@network.UCSD.EDU

Subject: alfa, bravo ...

To: info-hams@ucsd.edu

In article <1993Mar5.120357.28767@aau.dk>, adminpb@aau.dk (Nis Peder Bonde) writes...

>I'm sorry for wasting bandwidth on such a stupid question, but

>I haven't been able to find anything on this subject.

>

>I know that there is a table of "names" for each letter. I don't

>know what such a table is called, but I remember this from various

>films:

>

What you are looking for is called a "Phonetic Alphabet". The current ITU version is:

Alpha, Bravo, Charlie, Delta, Echo, Foxtrot, Golf, Hotel, India,  
Juliett, Kilo, Lima, Mike, November, Oscar, Papa, Quebec, Romeo,  
Sierra, Tango, Uniform, Victor, Whiskey, X-Ray, Yankee, Zulu.

There have been other versions in the past (WW2 used able, baker...) but this is the current one.

Peter Bennett VE7CEI

| Vessels shall be deemed to be in sight

Internet: bennett@erich.triumf.ca | of one another only when one can be  
Bitnet: bennett@triumfer | observed visually from the other  
TRIUMF, Vancouver, B.C., Canada | ColRegs 3(k)

-----  
Date: Fri, 5 Mar 1993 09:01:25 MST  
From: agate!howland.reston.ans.net!usc!sdd.hp.com!caen!destroyer!cs.ubc.ca!  
unixg.ubc.ca!kakwa.ucs.ualberta.ca!alberta!adec23!ve6mgs!rec-radio-info@ames.arpa  
Subject: Ham-Oriented Lists at Listserv@Knuth.MTSU.edu  
To: info-hams@ucsd.edu

We would like to remind you of several mailing lists available from our site which are oriented towards amateur radio, especially packet radio. Your subscription requests should be sent to "LISTSERV@KNUTH.MTSU.EDU" via E-mail with a blank subject line and a body beginning in column one such as:

subscribe <list\_name> <your\_name>

Other commands of use would be:

help  
index  
subscribers <list\_name>

Amateur-oriented (unmoderated) discussion lists are:

TENNET-L: High Speed Wireless Packet Networking using TCP/IP  
for statewide coverage in Tennessee  
GRACILIS-L: Discussions about Packet Radio using this manufacturer's  
equipment, firmware, development trends  
GRAPES-L: Discussions about the "Georgia Radio Amateur Packet  
Enthusiasts Society", their high-speed network/backbone  
system, and the WA4DSY 56Kbps RF Modem  
TNV-HAMS: Ham Radio in general in the Tennessee Valley  
All hams in/around Tennessee are welcome!  
KA9Q-UNIX: Users/ports of KA9Q TCP/IP packet system under any of  
the various flavors of Unix/Xenix/Linux (also including  
WAMPES under Unix)

For those of us directly on the Internet, one can telnet to port 372 on knuth.mtsu.edu (IP Address 161.45.1.1:372) and can interactively get help, subscribe/unsubscribe, etc. with the listserver (using IULP-proposed protocol). Check these lists out!

--

John N Schmidt KD4EAI, Lab Director + 615-898-5561 M-F 1300-2230Z <7-4:30>  
Middle Tennessee State University ++ 615-898-5538 or 615-896-2871 FAX 24H

1500 Greenland Drive, PO Box 135 +x+ ggjns@Knuth.MTSU.edu via the Internet  
Murfreesboro, TN 37132-0135 USA +xx+ MTSU Center for Remote Sensing and GIS  
AX.25-TCP/IP Adr [44.34.50.50] +xxx+ Home of Packet/Internet gateway W4EFQ

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- Postings to rec.radio.info: rec-radio-info@ve6mgs.ampr.ab.ca  
- rec.radio.info administrivia: rec-radio-request@ve6mgs.ampr.ab.ca

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Date: 6 Mar 93 19:42:23 GMT  
From: olivea!spool.mu.edu!howland.reston.ans.net!wupost!cs.uiuc.edu!  
vela.acs.oakland.edu!vela!swood@decwrl.dec.com  
Subject: INFO WANTED: Tokyo Hy-Power QRP CW/SSB HT  
To: info-hams@ucsd.edu

I saw an add in the back of last months QST that shows a new QRP HT  
sort of after the ones that were originally offered by AEA that was  
stated to be a QRP hand held operating both CW and SSB on the 7,21 & 50 MHz  
operating bands. (presumably skipping 35 MHz 5th)

It is said to produce 2-3W out dependant on the frequency of operation.

I know not much else about it, and was wondering if anyone else has seen  
or used these. It has an extendable whip antenna, but I could only  
imagine it being fully functional on the 50MHz frequencies.

If anyone else has any input on this little ditty, plz send me more info  
via email...

swood

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\*\*\*\*\* Last month to go shoot Fuzzy little bunnies!!! \*\*\*\*\*  
(sarcasm now people - put your flames away)  
(Crows may be taken out of season - see Hunting rules)  
<<<<<< Only seven months until bow season!!! >>>>>>

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Date: 6 Mar 93 21:57:22 GMT  
From: auspex-gw!ckranz@uunet.uu.net  
Subject: Knwd TS440S SWR shutdown  
To: info-hams@ucsd.edu

I've just discovered that my Kenwood TS440S has got real selective as to  
what's a bad SWR. It didn't do this before, but now it cuts back power  
if the match is more than 1.25 to 1. I can get it to work into a dummy  
load or if I use the antenna tuner. My Hustler 5BTv gets to 1.5 at the  
band edges.

Are there other TS440S owners who have had this happen to their rig? I believe I saw something about early shutdown in 440's on the net a long time ago. Any pointers would be appreciated. I hope I don't have to send it to the repair shop.

Thanks in advance,  
Chuck

-----  
Chuck Kranz    San Jose, Ca.  
wa7oef!chuck@auspex.com  
wa7oef!chuck@nsd.3com.com  
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--  
Chuck Kranz  
wa7oef!chuck@auspex.com (h)  
ckranz@auspex.com (w)

Amateur Radio: TCI/IP    AMTOR  
chuck%wa7oef@sanjose.ampr.org  
wa7oef@wa8drz.#nocal.ca.usa.na

-----  
Date: Sat, 6 Mar 1993 10:05:24 GMT  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!spool.mu.edu!sdd.hp.com!sgiblab!a2i!  
davidj@network.UCSD.EDU  
Subject: Old Motorola Repeater - Need help & Docs  
To: info-hams@ucsd.edu

The unit you describe isn't really a repeater, it's a mobile telephone duplex base station. If you can keep the power supply cool it will run forever. The CC3034C transmitter may not still meet the frequency stability requirements for commercial base station service unless it's been modified to use a compensated crystal oscillator rather than just a crystal in an oven.

I will look to see if I have a manual for the exciter. Look up the numbers for the receiver (like the CC3034C you found for the transmitter) and I may be able to find that too.

It's not likely that you'll find a manual for the Bell System version but there is probably a very similar commercial product that you can still get a manual for from Motorola.

73  
WA6NMF  
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Josephson Engineering, San Jose California                      MICROPHONES

Tel/ 408-238-6062 Fax/ 408-238-6022

INSTRUMENTATION

Date: Thu, 4 Mar 1993 18:18:53 GMT

From: munnari.oz.au!spool.mu.edu!sdd.hp.com!hpscit.sc.hp.com!hp!extra!hpcc05!hp-  
ptp!johns@network.UCSD.EDU

Subject: On-line frequency lists?

To: info-hams@ucsd.edu

Is there someplace in news/notes or an archive \*server\* that has a list  
of the "public service" frequencies? It can't be an anonymous ftp site  
because HP blocks that type of access to or from our portion of Internet...

Thanks

73's John, KC60VN

```
*****
* John Schubert; Hewlett Packard, ISD | The opinions contained herein *
* Sunnyvale, California | are my own, because nobody *
* INTERNET: jes@hpamsh4.hp.com | else wants them... *
* CompuServe: >INTERNET:jes@hpamsh4.hp.com| *
* HPDESK: HP2200/40 | "Ban low performance drivers, *
* | not high performance cars." *
*****
```

Date: 5 Mar 93 07:21:11 GMT

From: att!att!fang!tarpit!bilver!jwt!ksj@princeton.edu

Subject: Periphex SUCKS!

To: info-hams@ucsd.edu

UD173191@NDSUVM1.BITNET (Greg Moore) writes:

```
> Just got off the phone with Periphex, and boy, am I pissed! Here's
> the fiasco: My BP-84S suffers a minor deceleration trauma from about
> a six-inch drop. Predictably, the battery rail breaks (gotta love
> those Icom battery rails for the 24AT). So I called Periphex, thinking
> maybe they'd help, and they tell me it'll cost $29 EVEN THOUGH THE
> BATTERY IS STILL UNDER WARRANTY!
```

I'm at a loss to understand why you're so pissed, Greg. The way it looks  
from what you've written, you dropped something, it broke, and you're  
angry because the company that made it won't give you another one free.  
Call me crazy, but I don't expect a warranty to cover damage that I cause  
myself by dropping things, even from six inches. I'd say that's a pretty



universal way of thinking, which is why I guess they felt no need to put the obvious into their warranty.

The 24AT battery rail design is pretty horrible, granted. It doesn't make sense for Periphex to devote financial resources, though, to making up for Icom's mistakes. That's Icom's department, right?

As far as I've seen, Periphex sells a quality product at a very attractive price, and I've never had the first problem with them.

Scott

-----  
Date: Sat, 06 Mar 93 10:36:39 GMT  
From: wupost!zaphod.mps.ohio-state.edu!mstar!n8emr!bulletin@decwrl.dec.com  
Subject: Propagation Forecast Bulletin 9 ARLP009  
To: info-hams@ucsd.edu

=====  
| Automatic relayed from packet radio via |  
| N8EMR's Ham BBS, 614-895-2553 |  
=====

ZCZC AP70  
QST de W1AW  
Propagation Forecast Bulletin 9 ARLP009  
>From Tad Cook, KT7H, Seattle, WA  
March 5, 1993  
Relayed by KB8NW/OBS & BARF-80 BBS  
To all radio amateurs

SB PROP ARL ARLP009  
ARLP009 Propagation de KT7H

Solar activity increased last week. Flux values rose about 40 points, and there were some disturbances from solar flares. Most disturbed were the periods around 1200z on February 28 with a K index of five, and 0300z on March 4, when the K index reached six.

The last disturbance was caused by a major flare out of new region 7440 on the solar surface. The flare spewed forth late in the UTC day on March 2, causing a big upset a little over 24 hours later.

Solar flux had been expected to continue rising to around 165 on March 10, although it has already passed this level as this bulletin was written on Thursday. Following that, it should drop to around 115 around March 22. More disturbances are forecast for March 8 or

9 and 21 or 22.

HF propagation should improve over the near term as we head toward the equinox. Conditions should be stable for the Phone ARRL DX Contest this weekend.

The propagation projection for the contest period is from California to Europe. 80 meters should be best from 0130 to 0730z and 40 meters from 0030 to 1000. The peak period for 40 meters over this path should be from 0200 to 0800z. 30 meters should be open around the clock, with the best times from 0030 to 0900z. 20 meters should be best from 1430 to 0030z with peak periods from 1500 to 1630z and 2230 to 0000z. 17 meters should be best from 1500 to 2130z and 15 meters from 1600 to 2000z. 12 meters may be open from 1630 to 2000z with a peak right around 1730z. 10 meters should be open around 1730 to 1800z.

Sunspot numbers from February 25 to March 3 were 124, 118, 122, 142, 141, 122 and 110, with a mean of 125.6. 10.7 cm flux was 128, 126.2, 124, 124, 132.8, 143.5 and 151.1, with a mean of 132.7.  
NNNN

-----  
Date: Sat, 6 Mar 1993 09:52:20 GMT  
From: spool.mu.edu!darwin.sura.net!sgiblab!a2i!davidj@decwrl.dec.com  
Subject: Studio mics for HF?  
To: info-hams@ucsd.edu

In <62p4kmm@rpi.edu> maessm@rs6421.ecs.rpi.edu (Mat Maessen N2NJZ) writes:

>In article <1n7su9INNoqj@bigbird.csd.scarolina.edu>,  
dfrey@bigbird.csd.scarolina.edu (David Frey) writes:  
>|> The audio production folks occasionally upgrade their microphone inventory

>anced mike connection. This shouldn't be too hard if the mike is a dynamic  
>mike.

>However, stay away from any condensor mikes or mikes that need "phantom" power.  
>In order to power these mikes properly, you need to put +24 volts on one mike  
>and -24 volts on the other mike line, connected through resistors. This is not  
>a healthy voltage to have hanging around on the mike input of any ham rig.

NO! NO! Stop! Don't do that! Yow, maybe this is why there are so many blown up mics out there.

Phantom power, gentlemen, is +48V \_through 6.8K resistors to limit the current\_, and is used only with balanced mics (ham rigs are almost universally unbalanced)

You connect a 6.8K resistor from pin 2 to +48, and another one from pin 3 to +48, and ground is pin 1. You can connect a dynamic mic to this without hazard because the signal (voice coil, transformer, whatever) appears across pins 2 and 3 and pin 1 is floating or connected to the case.

Look, if anyone comes up with some interesting studio mics like RE-20's or phantom powered condenser types, I'll be happy to send them nice crisp HF mics in exchange.

73 and growl,  
David WA6NMF

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Josephson Engineering, San Jose California      MICROPHONES  
Tel/ 408-238-6062   Fax/ 408-238-6022      INSTRUMENTATION  
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Date: Sat, 06 Mar 93 23:53:47 GMT  
From: elroy.jpl.nasa.gov!swrinde!zaphod.mps.ohio-state.edu!mstar!n8emr!  
bulletin@decwrl.dec.com  
Subject: VK2SG RTTY DX Notes, 5 March  
To: info-hams@ucsd.edu

=====  
|      Automatic relayed from packet radio via      |  
|                      N8EMR's Ham BBS, 614-895-2553      |  
=====

SB DX @ ALLBBS \$RTDX0305  
VK2SG RTTY DX Notes, 5 March  
VK2SG RTTY DX Notes for week ending 5 March 1993 (BID RTDX0305)

Put this one on your calendar. BARTG RTTY Spring Contest 20 March at 0200z thru 22 March 0200z. Exchange RST, serial number beginning with 001 and UTC Time. Check February QST for further details.

Our information this week came from CE3GDN, DJ3IW and the Central Europe DX-Cluster Node DB0SPC, I5FLN and the IK5PWJ Packet Cluster, NT3B, N5PSI, WA1MBP, WX5L, W2JGR and the Twin-Cities DX Packet Cluster network, W5KSI, and ZS5S. Thank you all for your assistance.

Bandpass:

Friday 26  
0227-10102 OM2CQR

0256-14086 AL7BB  
0326-14089 UA0ST       Zone 18  
0645-14084 XT2BW  
0843-21088 9K2WA/NLD  
1408-28084 UW3AT  
1446-21085 ES7JW  
1456-2104 RB5FF  
1727-21088 OM3CPS  
1734-18100 SP4ASD  
1810-21084 YL2ZZ

Saturday 27

0838-21087 3C1EA  
0839-21084 ES7JW  
1006-21090 9K2WA/NLD  
1119-21084 7Q7ZZ  
1225-21084' 9\*0/OH3AC QSL via OH3AC  
1243-21084 S21A  
1342-21082 9H1ED  
1504-21085 OK1MP  
1530-21088 V51GZ  
1555-21087 5R8DG  
1621-21087 4X6U0       QSL via WB3CQN  
1645-21086 OM3CPS  
1733-21092 VP9MZ  
1815-14082 OD5PL       QSL via HB9CRV  
2042-14084 4K3/UW1ZU   Kildin Is. EU082

Sunday 28

0119-21088 KN4DG/KH2  
0753-21085 ES7FQ  
0756-14087 S57AN  
0908-28086 TA5C  
1054-14083 9A3IM  
1124-21087 UL7PBY  
1129-21090 FR5DE  
1208-14085 HP2VX  
1246-21089 9K2WA/NLD  
1253-2108( HK0/AA5AU   QSL via AA5AU  
1408-21082 CT3CU  
1525-21086 HK0/KB5GL   QSL via KA6V  
1435-14083 JX7DFA  
1630-14086 U050IN  
2116-21087 VP9MZ

Monday 01

0146-14084 HI8MTL

0317-14084 HK0/KB5GL  
0367-1,083 PJ2HB  
0616-14088 JG1RMB/JD1 Minami Torishima  
0640-14084 S57AN  
0815-14083 SU1AH  
0840-21088 JG1RMB/JD1  
0935-21092 UL7FBM  
1230-2108\* VU2JJQ  
1312-21089 UM8MU  
1346-14084 OD5PL  
1418-21087 UF6FJ  
1530-14088 HZ1AB  
1815-14085 CN8FD  
1851-21084 HK0/KB5GL

Tuesday 02

1142-14085 HK0/KB5GL  
1145-21085 VU2JJQ  
1146 21085 ES7JW  
1327-21087 OD5PL  
1346-21082 OK1AJN  
1416-21088 9K2WA  
1618-21084 HK0/KB5GL  
1735-21090 EA8ATE  
1800-21083 CT3CU  
1804-14083 S79PDL  
1825-14086 TK5YP  
1828-21087 5R8DG  
1853-21085 ZD7AY

Wednesday 03

0255- 3585 HK0/AA5AU  
0346- 7082 HK0/AA5AU  
0712-14084 FK8FI  
0728-14080 SV1LK  
1207-21089 ES7MM  
1541-21090 OD5PL  
1546-21082 LY2ZZ  
1640-21089 5R8DG  
1710-14084 SV8AJN Leamo Is.  
1723-21085 HK0/AA5AU  
1823-21086 CT3CU  
1904-21083 ZS6NW

Thursday 04

1305-21082 RB5FF  
1323-21085 OD5PL  
1629-21088 OK1KSL

1644-21089 5R8DG  
1702-21085 OK1MP  
2250-21085 HK0/KB5GL  
2302-14088 FM5DN  
2303-21087 ZF2ND

#### Notes of Interest

KH5 and KH5K, Palmyra-Kingman Reef. There might be a slight delay, due to some ship repairs. They plan to arrive on Kingman Reef 05 March, then some of the group will travel to Palmyra. The operation is scheduled for nine days. Calls used will be N9NS/KH5K and N0AFW/KH5.

9M0S, Spratly Islands. This operation is planned for 11-17 March in cooperations with the Malaysian Amateur Radio Trans. Society, MARTS. A multi-national team and vessel has been chartered for this expedition. Frequencies published were for CW and SSB and did not include RTTY. We sure hope this is an oversight.

FR5ZU/E and FR5ZU/G. Still need these QSL's? VE2NW, Zaren Amadouny, 18 Nisko, Dollard Des Ormeaux, PQ H9G 2R5, Canada, has the logs for the September and October 1992 operations and is now the QSL Manger for FR5ZU.

ET, Ethiopia. We should be hearing anytime now from Sid, G4CTQ signing ET3SID. Length of stay unknown. Only mode reported was RTTY. KYFC.

For next week's bulletin, please direct your note and bandpass to Jules, W2JGR @ CE2GDN.#STGO.CHL.SA

Remember, DX DON'T Sleep.

GL de Bob, WB2CJL at CE3GDN.#STGO.CHL.ZA  
Edited for Packet and Pactor by W5KSI and N6EQZ  
/EX  
SP KT7H @ N7DUO.WA.USA

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End of Info-Hams Digest V93 #286  
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